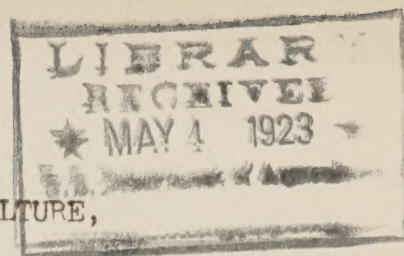


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UNITED STATES DEPARTMENT OF AGRICULTURE,
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SPRAYING FOR RUST MITES AND SCALE INSECTS FOLLOWING SPRAYING
FOR MELANOSE.

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The excellent results in preventing melanose obtained by many citrus growers last year have largely influenced a great many other growers to use the combination Bordeaux-oil emulsion spray this season. Of the hundreds of acres sprayed with this combination last year, only a very small percentage showed disastrous results. In one instance no follow-up spraying for either rust mites or scale insects was done, and as a logical result the fruit was very nearly unmarketable.

Where the Bordeaux-oil emulsion combination is used during the spring or early summer months, rust mites become somewhat more abundant than where it is not used. No doubt this is due to the action of the Bordeaux in preventing the development of what is presumed to be a fungus disease of rust mites. Since practically all growers who do any spraying at all spray during the last week in May or early June for rust mites, it may be unnecessary to caution them regarding the importance of this application. Wherever the Bordeaux-oil emulsion spray is used, however, it is imperative that a good spraying with lime-sulphur solution be given some time from May 25 to June 10. Dusting with sulphur may be substituted for spraying, but two applications of the dust may be necessary in case the rain washes off the first application before the expiration of the third day.

When Bordeaux-oil emulsion is thoroughly applied during the last week in April or the first week in May for the control of melanose, white flies and scale insects are also controlled equally as effectively as when plain oil emulsion is used, thereby eliminating the necessity of the May applications for these pests. In other words, this one application prevents melanose and controls white flies and scale insects. Furthermore, shadowing of the fruit does not follow this combination spray, as is sometimes the case when simple oil emulsion is used.

While it is true that this combination controls white flies and scale insects, these pests increase rapidly after its use, owing to the effect of the Bordeaux in the combination on the entomogenous fungi. In order to prevent any undue infestation of scale insects, a thorough spraying with straight oil emulsion of high efficiency should be given the last week in June or the first week in July. An application of oil emulsion at this time is extremely important and no grower should fail to make it. Such a spraying would reach the scale insects at a time when the largest percentage are in those stages that are most easily killed by the emulsion.

If it is possible to do so, an emulsion made of heavy oil, such as Atlantic Red or Nabob, should be used for this application. If the medium oils are used, it may be advisable to dilute them so that the spray material will contain approximately $1\frac{1}{2}$ per cent of oil.

This oil emulsion spray should be most thoroughly and carefully applied, wetting all branches and leaves on both surfaces. If such a spraying is given in the proper way, and if the material is used at sufficient strength, little or no further injury from scale insects is likely to follow.

IF ANY COPPER SPRAYS HAVE BEEN USED DURING THE CURRENT YEAR SPRAY JUNE 1 WITH SULPHUR FOR RUST MITES AND JUNE 25 WITH OIL EMULSION FOR SCALES.

